

WHAT IS CLAIMED IS:

1. Device for the ventilation of a passenger cabin in particular of an automobile, with at least one control valve with at least one edge overflowed with air in the main flow direction that can be moved from at least a first into a second position, characterized in that the mainly two-dimensional valve, in particular in the area of the overflowed edge 3, has a changing cross-sectional profile 3, which diverts at least part of the air flowing over the edge in the main flow direction into a number of stream directions deviating from the main flow direction.

2. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the control valve has cross-sectional super-elevations in the overflowed edge area.

3. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the control valve has flow bodies in the overflowed edge area.

4. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the flow bodies are selected from a group of structures, which contains turbulence generators, pinnacles, calottes, spherical calottes, nubs, pyramids, indentations, gratings, grating sections, cylinders, combinations thereof, etc.

5. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the flow bodies are arranged at a predetermined angle α in relation to the overflowing edge area, which is between 25° and 90° , preferably between 45° and 60° .

6. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the control valve is an integral injection-molding part.

7. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the control valve, in particular the overflowed edge, has a sealing edge in at least one sub area.

8. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the control valve has reinforcing ligaments 32.

9. Device in particular in accordance with at least one of the aforementioned claims, characterized in that at least two control valves are arranged next to each other on a rotation axis.

10. Device in particular in accordance with at least claim 9, characterized in that recesses 33 that extend from at least one outer edge with a predetermined length in the direction of the rotation axis are provided between control valves.

11. Device in particular in accordance with at least one of the aforementioned claims, characterized in that the control valve has at least one rotation axis 4, the end area of which is provided with at least one coupling device 30.

12. Air-flow routing device with at least one fan, at least one air duct, at least one heat exchanger, and at least one control valve in accordance with at least one of the aforementioned claims, whereby at least one control valve is arranged in the ventilation channel.

13. Use of at least one control valve in accordance with at least one of the aforementioned claims in a ventilation system and/or air-conditioning system of an automobile, for the control and/or regulation of the flow path and/or volume flow.

14. Procedure for the reduction of flow noises in a ventilation system, in particular the reduction of flow noises from a control valve preferably in an automobile, characterized in that the air, which flows in a main flow direction over the control valve, in particular over at least one edge of the control valve, is partially diverted into a number of flow directions deviating from the main flow direction.

15. Procedure in particular in accordance with claim 14, characterized in that the control valve is implemented in accordance with at least one of claims 1 through 13.

16. Procedure for the production of a control valve in accordance with at least one of the aforementioned claims, characterized in that the cross-sectional change of the overflowed edge is created by coating at least one edge area of the control valve.